

REMARKS

In light of the above-amendment and remarks to follow, reconsideration and allowance of this application are requested.

Claim 5 has been canceled and claims 1, 6 and 7 have been amended herein. Accordingly, claims 1-4, 6 and 7 are presented for consideration.

Claims 3 and 6 have been objected to and in accordance with the Examiner's kind suggestion, claims 3 and 6 have been amended in good-faith to satisfy such objections. It is respectfully requested that these objections to claims 3 and 6 be withdrawn.

Claims 1-4 and 6-7 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,870,128 to Yazawa et al. (Yazawa) in view of U.S. Published Patent Application No. 2004/0120156 (now issued as U.S. Patent 6,964,501) to Ryan (Ryan). Claim 2 has been canceled but the subject matter recited therein has been substantially incorporated in amended independent claim 1. Applicants respectfully traverse these rejections.

Applicant submits that only the present invention teaches or suggest a control unit for controlling (or determining) the amount of power supplied to the LED group by the light emission controlling circuit and the amount of power supplied to the chip resistor group, as required in amended claim 1. Additionally, only the present invention teach or suggests a control unit comprising a warm-up controlling unit for controlling the light emission controlling circuit to supply the maximum power to the LED group and the heat generation controlling circuit to supply the maximum power to the chip resistor group until the substrate reaches a predetermined threshold, as required in amended claim 1.

Moreover, only the present invention teaches or suggests a LED group that (1) contributes to heating or warming up of the substrate along with the chip resistor group and (2) irradiates the object with proper light amount when scanning the object, as required in amended claim 1.

Of course, to establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2143.

Here, the Examiner has failed to establish a *prima facie* case of obviousness because Yazawa and Ryan independently or in combination does not teach or suggest all the claim elements of amended claim 1 and thus also included in dependent claims 3, 4, 6 and 7. Therefore, it follows that, contrary to the Examiner's assertion, Yazawa and Ryan independently or in combination does not render obvious claim 1, or any of claims 2-4, 6 and 7 dependent on claim 1.

Additionally, there is no motivation in Yazawa or Ryan to suggest that the teachings of Yazawa should be combined with Ryan. *In re Sernaker*, 217 U.S.P.Q. 1, 6 (Fed. Cir. 1983); *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 8 U.S.P.Q. 2d 1468, 1475 (Fed. Cir. 1988); *In re Fritch*, (Fed. Cir. 1992) 91-1318; *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1299 (Fed. Cir. 1989); *In re Fine*, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

The decision of *In re Geiger*, 2 U.S.P.Q. 2d 1276 (1987) is quite relevant. There, the Federal Circuit stated:

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination."

* * *

“At best in view of these [prior art] disclosures, one skilled in the art might find it obvious to try various combinations of these known [agents]. However, this is not the standard of 35 U.S.C. Section 103.”

Moreover, absent applicants' disclosure, there appears to be absolutely no reason to add Ryan to Yazawa. In fact, the only reason one might turn to either Ryan, if at all, is because of the hindsight gleaned from applicant's own disclosure. The Federal Circuit has been consistent in warning against hindsight reconstruction of the prior art. As pointed out in Uniroyal v. Redkin-Wiley, 5 U.S.P.Q. 2d, 1434, 1438 (Fed. Cir. 1988):

“When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. ...Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination.”

* * *

“...it is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention.”

In Uniroyal, the CAFC referred to Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Company, 221 U.S.P.Q. at 489, to conclude that “the mere fact that a device or process utilizes a known scientific principal does not alone make that device or process obvious.” 5 U.S.P.Q. 2d at 1440.

In Orthopedic Equipment Company, Inc. v. United States, 217 U.S.P.Q. 193-199 (Fed. Cir. 1983), the Federal Circuit warned,

“The difficulty which attaches to all honest attempts to answer this question [of obviousness based upon a combination of prior art] can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right

references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness in a court of law."

In reversing an Examiner's rejection based upon obviousness, wherein the Examiner concluded that a claimed apparatus is shown simply by turning a prior art reference "upside down," the CAFC ruled:

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification."

In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984), and citations noted therein.

Further, the prohibition against combining references in the absence of a prior art suggestion or motivation to do so is strengthened if the references to be combined are unrelated and from nonanalogous fields. In the present case, there is no relationship between Yazawa and Ryan; Yazawa relates to a light-emitting device assembly whereas Ryan relates to a high-power lighting assembly. Even on the face of these two patents, they are from nonanalogous fields (note the areas of classification and fields of search indicated on each patent). The CCPA has held that where two patents relate to nonanalogous arts, they may not properly be combined to form a basis for rejection. In re Lobl, 108 U.S.P.Q. 229, 231 (CCPA 1955). The court there found that it was not likely for one seeking to produce an improvement in the field to which the application related to look to a totally different art for suggestions.

This doctrine of nonanalogous art has been applied in In re Van Wanderham, 154 U.S.P.Q. 20 (CCPA 1967). In that case, the claimed subject matter was directed to the rapid cooling of fuel. The applied prior art was concerned with the quenching of a specimen in a cooling liquid, as suggested in the cutlery art. Although this prior art was concerned with rapid cooling, the court clearly ruled that the cutlery art from whence the

reference was obtained was far removed from the subject matter of the application. Hence, the prior art reference was not evidence of the obviousness of the claimed device.

In In re Imperato, 179 U.S.P.Q. 730 (CCPA 1973), the CCPA observed that different references from nonanalogous arts, if combined, would give the beneficial result achieved by the claimed subject matter. However, it was ruled that such references could not properly be combined to render the claimed invention obvious in the absence of a specific teaching to permit the combination. See also Ex parte Vomstein, 180 U.S.P.Q. 333 (PTO Bd. Of App. 1973) which ruled that it is not obvious to modify a basic reference in the art to which a patent application pertains with a secondary reference from an unrelated art.

The CCPA reiterated its position that nonanalogous art cannot be considered pertinent prior art under 35 U.S.C. § 103 in In re Pagliaro, 210 U.S.P.Q. 888, 892 (CCPA (1981)), wherein the Court quoted from In re Wood, 202 U.S.P.Q. 171, 174 (CCPA 1979):

“In resolving the question of obviousness, we presume full knowledge by the inventor of all prior art in the field of his endeavor. However, with regard to prior art outside the field of his endeavor, we only presume knowledge from those arts reasonably pertinent to the particular problem with which the invention was involved... The rationale behind this rule precluding rejections based on the combination of teachings of references from nonanalogous art is the realization that an inventor could not possibly be aware of every teaching in every art. Thus, the attempt to more closely approximate the making of an invention by only presuming knowledge by the inventor of prior art in the field of his endeavor and in analogous arts.

“The determination that a reference is from a nonanalogous art is therefore twofold. First, we decide if the reference is within the field of the inventor’s endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved.”

Using its rule from Wood, the CCPA found in Pagliaro that the reference was not within the field of the inventor's endeavor and it was not pertinent to the inventor's problem. In the present case, Yazawa and Ryan are not within the field of applicants' endeavor and they are not pertinent to the problem of controlling the amount of power supply to the LED group to both irradiate the object to properly scan the object and heat or warm up the substrate along with the chip resistor group.

In view of the foregoing, it is respectfully submitted that one of ordinary skill in the art, after reading and understanding Yazawa, would not even turn to Ryan – and if she did, she would not understand how or why Ryan should be combined with Yazawa.

Furthermore, the claimed invention defined by claim 1 eliminates the shortcomings and disadvantages encountered with the prior art. Specifically, the claimed invention controls amount of power supply to the LED group to irradiate the object to properly scan the object and heat or warm up the substrate along with the chip resistor group. It is undeniable that neither Yazawa or Ryan is even remotely concern with such problem. Since applicant has recognized a problem not addressed by the cited prior art and solved that problem in a manner not suggested by either Yazawa or Ryan, the basis for patentability of the claims is established. See In re Wright, 6 U.S.P.Q. 2d, 1959, 1961-1962 (Fed. Cir. 1988). There, the CAFC relied upon previous decisions requiring a consideration of the problem facing the inventor in reversing the Examiner's rejection. "The problem solved by the invention is always relevant". Id. at 1962. See also, In re Rinehart, 189 U.S.P.Q. 143, 149 (CCPA 1967), which stated that the particular problem facing the inventor must be considered in determining obviousness.

Absent evidence that the specific problem associated with controlling the power supplied to the LED group to both irradiate the object to properly scan and heat or warm up the substrate in conjunction with the chip resistor group was even recognized by the prior art, there can be no finding that the invention as a whole would have been obvious. As stated by the PTO Board of Appeals in Ex parte Breidt and Lefevre, 161 U.S.P.Q.

767, 768 (1968), "an inventive contribution can reside as well in the recognition of a problem as in a solution". It further appears that the conclusion reached by the Board of Appeals in Ex parte Minks, 169 U.S.P.Q. 120 (1969), is here in point. There, the Board concluded that "[a]ppellant having discovered the source of the problem and solved the same... he is... entitled to patent protection". Id. at 121.

In view of the foregoing authorities, it is respectfully submitted that, since neither Yazawa or Ryanb is even aware of the problem addressed by applicant, and since the cited prior art reference does not suggest the solution defined by claims 1, 3, 4, 6 and 7, these claims are unobvious and patentably distinct over the combination of Yazawa and Ryan. It is respectfully requested that the rejection of claims 1, 3, 4, 6 and 7 under 35 U.S.C. § 103 be withdrawn.

Statements appearing above in respect to the disclosures in the cited references represent the present opinions of the applicant's undersigned attorney and, in the event that the Examiner disagrees with any of such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the reference providing the basis for a contrary view.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0624, under Order No. NY-KIT 365-US (10402617) from which the undersigned is authorized to draw.

Respectfully submitted,
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